Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application. Claims 2, 5, 13, 16, 23 and 25 are herein canceled without prejudice. Please enter new claims 33-42.

Listing of Claims:

1. (Currently amended) A method of forming a nitrogen-containing dielectric film comprising:

incorporating nitrogen into a dielectric film using ~~a nitridation~~ ammonia (NH_3) gas [[and]] in a rapid thermal annealing process, wherein an ultra-low pressure ~~of equal to or less than about 10 Torr~~ is used for the rapid thermal annealing process, wherein the nitrogen incorporated into the dielectric film forms only one nitrogen concentration peak, and wherein the nitrogen concentration peak occurs at the top surface of the dielectric film without forming a tail to the bottom surface of the dielectric film.

2. (Canceled)

3. (Currently amended) The method of forming a nitrogen-containing dielectric film of claim 1 wherein the nitrogen incorporated into the dielectric film has a nitrogen concentration equal to or greater than 5%.

4. (Currently amended) The method of forming a nitrogen-containing dielectric film of claim 1 wherein the dielectric film is equal to or less than about 12 angstroms.

5. (Canceled)

6. (Currently amended) The method of forming a nitrogen-containing dielectric film of claim 1 wherein the dielectric film is silicon dioxide (SiO_2).

7. (Currently amended) The method of forming a nitrogen-containing dielectric film of claim 1 wherein after the nitrogen is incorporated, a silicon ~~oxinytride~~ oxynitride is formed.

8. (Currently amended) A method of forming a gate stack comprising:

forming a silicon dioxide film on a substrate;

incorporating nitrogen into the silicon dioxide film using a rapid thermal annealing process [[and]] with ~~a nitridation~~ ammonia (NH_3) gas, ~~wherein the rapid thermal annealing process occurs at about or less than about 10 Torr,~~ the incorporating of nitrogen forming a silicon oxynitride film on the substrate;

continuing the rapid thermal annealing process with ~~nitridation~~ ammonia (NH_3) gas for a sufficient amount of time for nitrogen to be incorporated into the silicon dioxide film to form the silicon oxynitride film with a nitrogen concentration of about or more

than 5%, wherein the nitrogen incorporated into the silicon dioxide film forms only one nitrogen concentration peak, and wherein the nitrogen concentration peak occurs at the top surface of the silicon dioxide film without forming a tail to the bottom surface of the silicon dioxide film; and

forming a cap layer on the silicon oxynitride.

9. (Original) The method of forming a gate stack of claim 8 wherein the rapid thermal annealing process occurs at a temperature between about 900-1100°C.

10. (Currently amended) The method of forming a gate stack of claim 8 further comprising:

subjecting the silicon oxynitride film to a post annealing process after the silicon oxynitride is formed, wherein the post annealing process occurs at a temperature between about 1000-1100°C.

11. (Original) The method of forming a gate stack of claim 10 wherein the post annealing process occurs at a pressure of less than or equal to about 5 Torr.

12. (Currently amended) A method of forming a dielectric film comprising:

incorporating nitrogen into a silicon dioxide film using ~~a nitridation~~ ammonia (NH_3) gas [[and]] in a rapid thermal annealing process, wherein an ultra-low pressure ~~of equal to or less than about 10 Torr~~ is used for the rapid thermal annealing process, the

incorporating of nitrogen into the ~~dielectric~~ silicon dioxide film forming a silicon oxynitride film, wherein the nitrogen incorporated into the silicon dioxide film forms only one nitrogen concentration peak, and wherein the nitrogen concentration peak occurs at the top surface of the silicon dioxide film without forming a tail to the bottom surface of the silicon dioxide film; and

post-annealing the silicon oxynitride film after a sufficient amount of nitrogen is incorporated into the silicon dioxide film.

13. (Canceled)

14. (Original) The method of forming a dielectric film of claim 12 wherein the nitrogen incorporated into the silicon dioxide film has a nitrogen concentration equal to or greater than 5%.

15. (Currently amended) The method of forming a dielectric film of claim 12 wherein the silicon dioxide film is equal to or less than about 12 angstroms.

16. (Canceled)

17. (Currently amended) The method of forming a dielectric film of claim 12 further ~~comprises~~ comprising forming the silicon dioxide film.

18. (Currently amended) A method of forming a gate stack comprising:

placing a substrate into a first processing chamber of a cluster tool, the cluster tool having a plurality of processing chambers;

forming a silicon dioxide film on the silicon wafer in the first processing chamber;

without breaking vacuum, transferring the substrate from the first processing chamber into a second processing chamber, the second processing chamber capable of running a rapid thermal annealing process at a reduced pressure;

introducing ~~a nitridation~~ ammonia (NH_3) gas into the second processing chamber while maintaining an ultra-low pressure of the second processing chamber ~~at about or less than about 10 Torr~~ to form a silicon oxynitride film; and

continuing the ~~nitridation~~ ammonia (NH_3) gas into the second processing chamber for a sufficient amount of time for nitrogen to be incorporated into the silicon dioxide film to a nitrogen concentration of about or more than 5%, wherein the nitrogen incorporated into the silicon dioxide film forms only one nitrogen concentration peak, and wherein the nitrogen concentration peak occurs at the top surface of the silicon dioxide film without forming a tail to the bottom surface of the silicon dioxide film.

19. (Currently amended) The method of forming a gate stack of claim 18 comprising:

maintaining a temperature between about 900-1100°C while the ~~nitridation~~ ammonia (NH_3) gas is being introduced.

20. (Currently amended) The method of forming a gate stack of claim 18 comprising:

subjecting the substrate to a post annealing process after the silicon oxynitride film is formed, wherein the post annealing process occurs at a temperature between about 1000-1100°C.

21. (Original) The method of forming a gate stack of claim 20 wherein the post annealing process occurs in a third processing chamber.

22. (Original) The method of forming a gate stack of claim 20 wherein the post annealing process occurs at a pressure of about 5 Torr.

23. (Canceled)

24. (Original) A method of treating a dielectric film comprising:

exposing the dielectric film to ~~a nitridation~~ ammonia (NH_3) gas at an ultra-low pressure ~~equal to or less than about 10 Torr~~; and

subjecting the dielectric film to a rapid thermal annealing process during the exposing of the dielectric film to the ~~nitridation~~ ammonia (NH_3) gas to incorporate nitrogen into the dielectric film to form a silicon oxynitride film, wherein the nitrogen incorporated into the dielectric film forms only one nitrogen concentration peak, and

wherein the nitrogen concentration peak occurs at the top surface of the dielectric film without forming a tail to the bottom surface of the dielectric film.

25. (Canceled)

26. (Original) The method of treating a dielectric film of claim 24 wherein the dielectric film is silicon dioxide (SiO_2).

27. (Currently amended) The method of treating a dielectric film of claim 24 wherein after the nitrogen is incorporated, a silicon ~~oxinytride~~ oxynitride film is formed.

28. (Original) The method of treating a dielectric film of claim 24 wherein the rapid thermal annealing process occurs at a temperature between about 900-1100°C.

29. (Currently amended) The method of treating a dielectric film of claim 27 further comprising:

subjecting the silicon oxynitride film to a post annealing process after the silicon oxynitride film is formed, wherein the post annealing process occurs at a temperature between about 1000-1100°C.

30. (Original) The method of treating a dielectric film of claim 29 wherein the post annealing process occurs at a pressure of less than or equal to about 5 Torr.

31. (Original) The method of treating a dielectric film of claim 24 wherein the subjecting the dielectric film to the rapid thermal annealing process is continued until a concentration of nitrogen of at least about 5% is incorporated into the dielectric film.

32. (Original) The method of treating a dielectric film of claim 27 further comprising subjecting the silicon oxynitride film to a post-annealing process wherein the silicon oxynitride is post annealed in a non-nitridation atmosphere after a desired concentration of nitrogen is incorporated into the dielectric film.

33. (New) The method of claim 1, wherein the ultra-low pressure is equal to or less than about 10 Torr.

34. (New) The method of claim 8, wherein the ultra-low pressure is equal to or less than about 10 Torr.

35. (New) The method of claim 12, wherein the ultra-low pressure is equal to or less than about 10 Torr.

36. (New) The method of claim 18, wherein the ultra-low pressure is equal to or less than about 10 Torr.

37. (New) The method of claim 24, wherein the ultra-low pressure is equal to or less than about 10 Torr.

38. (New) A method of forming a nitrogen-containing dielectric film comprising:

forming a dielectric film on a substrate; and

incorporating nitrogen into the dielectric film using a rapid thermal annealing process with ammonia (NH_3) gas at an ultra-low pressure, wherein the dielectric film does not comprise nitrogen prior to the rapid thermal annealing process with ammonia (NH_3) gas.

39. (New) The method of claim 38, wherein the dielectric film comprises silicon dioxide, and wherein the rapid thermal annealing process with ammonia (NH_3) gas forms a silicon oxynitride film.

40. (New) The method of claim 38, wherein the ultra-low pressure is equal to or less than about 10 Torr.

41. (New) The method of claim 38, wherein the nitrogen incorporated into the dielectric film forms only one nitrogen concentration peak, and wherein the nitrogen concentration peak occurs at the top surface of the dielectric film without forming a tail to the bottom surface of the dielectric film.

42. (New) The method of claim 38, further comprising:

continuing the rapid thermal annealing process with ammonia (NH_3) gas for a sufficient amount of time for nitrogen to be incorporated into the dielectric film with a nitrogen concentration of about or more than 5%.